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SENATE

REPORT
99-328

ORIGINAL

SUPPORT FOR A NATIONAL STORM PROGRAM

JUNE 26 (legislative day, JUNE 23), 1986.—Ordered to be printed

Mr. DANFORTH, from the Committee on Commerce, Science, and Transportation, submitted the following

REPORT

[To accompany S. Con. Res. 137]

The Committee on Commerce, Science, and Transportation, to which was referred the concurrent resolution (S. Con. Res. 137) expressing the sense of the Congress that the Federal Government take immediate steps to support a National STORM Program, having considered the same, reports favorably thereon with amendments and recommends that the concurrent resolution do pass.

PURPOSE OF BILL

The resolution urges the Federal Government to support funding for a National STORM Program. The purpose of the STORM program is to improve prediction and monitoring of severe weather to minimize damage caused by stormscale weather systems. The resolution also calls for prompt administration response to compensate for diminished forecasting capability as a result of the May 3, 1986 loss of a key U.S. environmental satellite.

BACKGROUND AND NEEDS

STORM is an acronym for Stormscale Operational and Research Meteorology. Stormscale weather consists of severe weather systems ranging in size from less than 1 mile to several hundred miles. Common stormscale weather includes tornadoes, thunderstorms, squall lines, flash floods, heavy rain, and dense fog.

Stormscale weather causes annual economic loss of $20 billion and claims nearly 1,000 lives per year. The Committee believes that modernization of the Nation's weather services can improve significantly the prediction and monitoring of stormscale weather

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and reduce the damage caused by stormscale weather. The National STORM Program is intended to develop and coordinate the observation and data collection, processing, and dissemination technology necessary to improve severe storm forecasting.

The STORM program would include:

(1) A new generation of geostationary environmental satellites with improved capabilities;

(2) maintenance of two polar-orbiting environmental satellites;

(3) development of a new weather radar system for the National Weather Service, the Federal Aviation Administration, and the Air Force;

(4) development of an automated surface observation system;

(5) development of ground-based wind profilers; and

(6) development of data processing systems to integrate raw weather data into useful forecast information.

The Committee is aware that many of the components of STORM are in place or under development; in fact, the Committee has authorized funding for many of these programs. The Committee believes, however, that a Federal plan for development, implementation, and coordination of the components of STORM would result in the most effective use of these technologies.

The Committee also is concerned about the status of the geostationary operational environmental satellite (GOES) system. The loss of the GOES-G satellite in the May 3, 1986 Delta launch failure has left the Nation with only one GOES satellite in orbit and only one additional satellite to be launched before 1990, when the new generation of GOES will be ready for launch. The Committee reviewed the status of the GOES system in a hearing on May 8, 1986. The hearing reaffirmed the importance of a two-GOES system for weather forecasting and pointed out the risk that the Nation will experience a gap in GOES service by the end of the decade. The Committee believes that this situation exemplifies the need for long-term planning of the funding and development schedules of weather services.

Legislative History

S. Con. Res. 137 was introduced by Senators Heflin and Hollings on May 7, 1986. The resolution was ordered reported by the Committee without objection on June 3, 1986. The resolution is cosponsored by Senators Zorinsky, Boren, Riegle, Exon, Bumpers, Nunn, Long, Rockefeller, Stevens, and Simpson.

Senator Hollings introduced a similar resolution (S. Con. Res. 109) in the 98th Congress. The resolution was reported unanimously by the Committee and unanimously agreed to by the Senate. The House companion (H. Con. Res. 203) was not acted upon.

Section-by-Section Analysis

The resolution consists of a preamble and two operative clauses. The first clause consists of four paragraphs on implementing a STORM program to improve prediction and monitoring of stormscale weather. The second clause addresses the weather forecasting problems, especially for hurricanes, that have resulted from the

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recent loss of the National Oceanic and Atmospheric Administration (NOAA) GOES–G satellite.

FIRST CLAUSE

Paragraph (1) expresses the sense of the Congress that the Federal Government should support funding for the STORM program under the leadership of NOAA. The Committee notes that NOAA, specifically the National Weather Service, is the primary Federal agency for weather services and technologies, and the Committee strongly urges the administration to establish NOAA as the lead agency in the STORM program. The Committee further encourages NOAA to work closely with other agencies, including the Departments of Defense, Interior, and Transportation, and the Environmental Protection Agency, the National Aeronautics and Space Administration, and the National Science Foundation.

Paragraph (2) urges the President to transmit to the Congress a plan for the STORM program, including the proposed activities of the program and the budgetary requirements. The report should be transmitted by August 1, 1986, and every fifth year thereafter. Paragraph (3) states that the President's plan for the STORM program should specify the departments and agencies of the Government which would conduct the various activities of STORM.

Paragraph (4) calls upon the President to report on or about January 1, 1987 to the Congress on progress made in implementing the STORM program. The Committee expects that this report will detail the status of the development of STORM's components and will provide information relevant to the fiscal year 1988 budgetary requirements of STORM.

SECOND CLAUSE

This final clause of the resolution calls upon the administration to place high priority on reinstating the two-GOES satellite system at the earliest opportunity. The Committee received testimony from NOAA about possible means of avoiding a gap in GOES service, and the Committee expects NOAA to provide the Committee with a more detailed analysis of these alternatives.

The two-GOES satellite system provides coverage of the entire continental United States and large areas of the Pacific Ocean, Atlantic Ocean, and Gulf of Mexico. GOES data are critical to weather forecasting, especially to hurricane monitoring, because GOES provides continuous coverage of ocean areas in which hurricanes develop. When there is only one GOES satellite in operation, NOAA's ability to track hurricanes is handicapped, as shown by the illustration which NOAA provided to the Committee.

The Committee believes that the administration should place a high priority on restoring the continuity of the two-GOES system and should, in the meantime, provide the best practical hurricane coverage by such means as increased hurricane reconnaissance flights.

[The illustration follows:]

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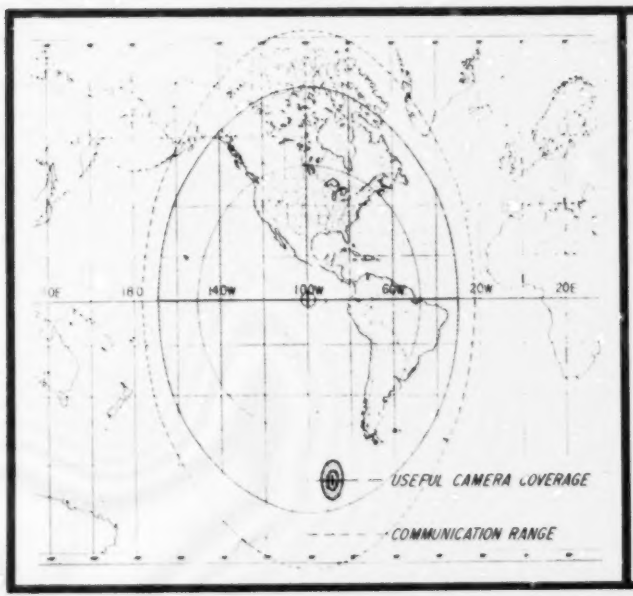
GOES Geographic Coverage

One Satellite



Two Satellites